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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,560	12/14/2001	Kazunaga Horiuchi	111467	5970

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER	
HENDRICKSON, STUART L	
ART UNIT	**PAPER NUMBER**
1754	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/014,560	Applicant(s) Hoichi
	Examiner Kendrick Son	Group Art Unit 1754

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 2/9/04.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-28 is/are pending in the application.

Of the above claim(s) 1-9 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 10-28 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claim(s) 1-28 are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)–(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)–(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

☒ Information Disclosure Statement(s), PTO–1449, Paper No(s). _____

☒ Notice of Reference(s) Cited, PTO–892

☐ Notice of Draftsperson's Patent Drawing Review, PTO–948

☐ Interview Summary, PTO–413

☐ Notice of Informal Patent Application, PTO–152

☐ Other _____

Office Action Summary

Applicant's election with traverse of Group II in Paper of 2/9/04 is acknowledged. The traversal is on the ground(s) that the searches are congruent. This is not found persuasive because there is a burden of search; the process steps are not necessary in a product-by-process claim. The requirement is still deemed proper and is therefore made FINAL. Claims 1-9 are withdrawn.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-16, 20 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 13-15, there is no antecedent for 'the' structural feature. Claim 15 is particularly unclear as to the required structure.

In claim 12 'given' is unclear, and without antecedent. In claim 16, 'different lyophilic' is unclear. It appears that a word like 'value' or 'constant' was omitted. In claim 20 'are involved' is unclear as to the structure. 'plural' is misspelled in claim 28.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10-21, 25-27 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Choi 6440761.

Choi teaches in figs. 3-5 and column 4 carbon nanotubes interconnected by extraneous materials; compare especially to fig. 12A. While not teaching the same process, where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct, not the examiner to show that the same process of making; see In re Brown, 173 U.S.P.Q 685, and In re Fessmann, 180 U.S.P.Q. 324. It is noted that the intended use of a given structure does not actually limit it.

Claims 22-24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. article.

Zhang teaches on pg. 3473, 3475 randomly crossed, generally aligned carbon nanotubes between two electrodes. This differs from claim 28 in not mounting the electrodes, however doing so is an obvious expedient to exploit the electronic properties of the web, and is suggested to be used in photocells by Zhang. This differs from claim 22 in not using several stacked together, however doing so is an obvious expedient to make a photovoltaic network, suggested by Zhang.

Claims 10-21, 25-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zhang et al. article.

Zhang teaches a nanotube web; where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct, not the examiner to show that the same process of making; see In re Brown and In re Fessmann supra. It is noted that the intended use of a given structure does not actually limit it.

The Heer and Dai articles submitted are pertinent to the claims as representative of nanotube deposition processes, but are not applied to avoid duplication of rejection.

Any inquiry concerning this communication should be directed to examiner Hendrickson at telephone number (571) 272-1351.

Stuart Hendrickson
examiner Art Unit 1754